



Watershed Condition Monitoring News

Winter 2007 Issue

Watershed Sampling Update

To date, AREMP has sampled more than 800 sites in 141 watersheds spread throughout the Plan area. These watersheds are a subset of the 250 watersheds selected for monitoring the Northwest Forest Plan. Data on the physical, biological, and chemical attributes were collected at randomly selected sites in each watershed. These data were combined with road and vegetation data using a decision support model to determine the condition of each watershed. Each year, about 20% of the sites are resampled to help us detect changes in watershed condition and as part of our quality control program. All data are available on the web at: <http://www.reo.gov/monitoring/watershed>.

AREMP 2.0

AREMP is changing in response to feedback received from managers, who need information at spatial scales that range from individual watersheds to administrative units, such as national forest or BLM districts. Watershed condition assessments, based on upslope and riparian data derived from GIS layers, will be conducted in every watershed that contains at least 25% federal ownership (Figure 1). To date, we have assessed the watersheds on the Olympic Peninsula, the Gifford-Pinchot and Willamette National Forests, and the Medford Bureau of Land Management District. We are working with researchers from the USDA Pacific Northwest Forest Sciences Laboratory and Oregon State University to use upslope and riparian data to make inferences about stream condition. Field data will be used to supplement the watershed condition assessments and validate the models used to assess stream condition.

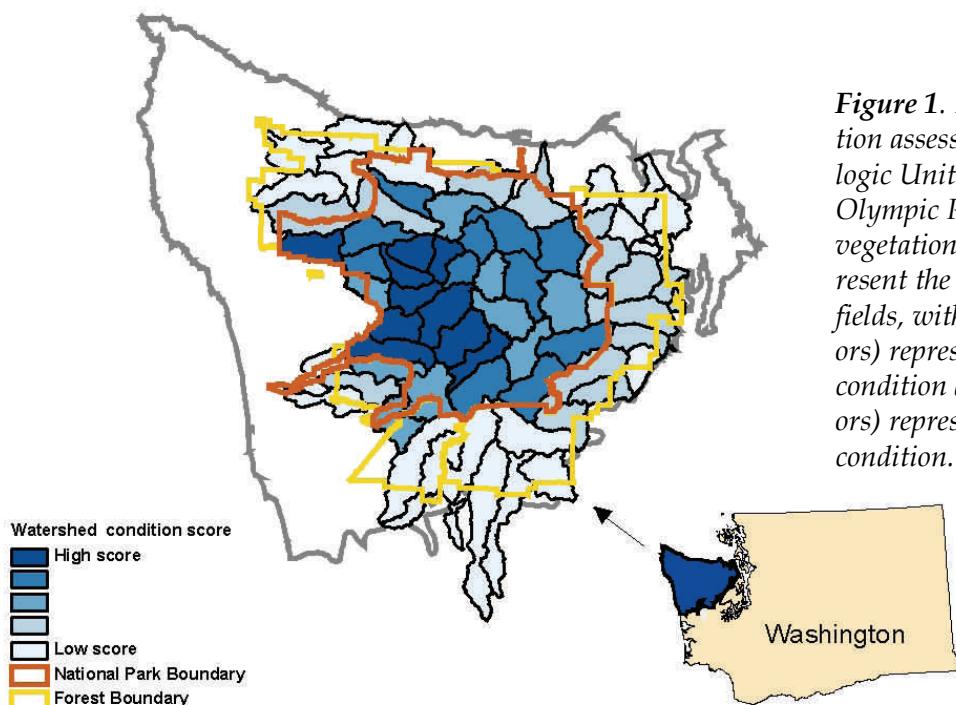
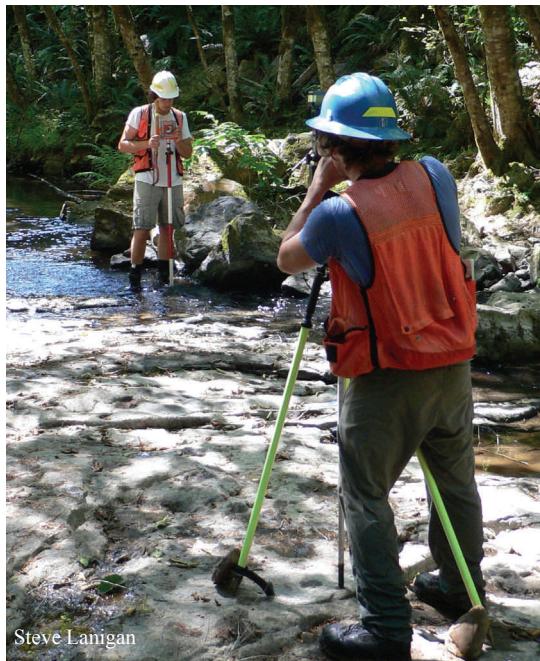


Figure 1. Example watershed condition assessment for all 6th-field Hydrologic Units on federal lands on the Olympic Peninsula based on road and vegetation data. Condition scores represent the condition of individual 6th-fields, with higher scores (darker colors) representing watersheds in good condition and low scores (lighter colors) representing watersheds in poor condition.

Decision-Support Models—Multiple Uses

AREMP personnel have been working with unit managers to expand the uses of decision-support models. Decision-support models are being used in the forest plan revision process as part of the key watershed determination and focal species sustainability analysis required under the new (draft) Aquatic and Riparian Conservation Strategy. Currently the models are being used by experts on the Colville, Malheur, Okanogan-Wenatchee, Umatilla, and Wallowa-Whitman National Forests. Decision-support models are also being developed to determine the likelihood of success for the reintroduction of bull trout in the Clackamas River on the Mt. Hood National Forest in Oregon. Although the model will initially be used in the Clackamas River, the decision process used to construct the model will be applicable to other areas.



Steve Lanigan

Project-Level Monitoring

AREMP partnered with the Roseburg BLM district by conducting project-level monitoring in Wolf Creek, a tributary of the lower Umpqua River. Biologists believe that Wolf Creek was a stronghold for coho prior to extensive logging and splash damming. Boulders and large wood will be placed throughout the mainstem and major tributaries to increase the abundance of high-quality spawning and rearing habitat for coho. The project is a collaborative effort between the BLM, Oregon Department of Fish and Wildlife, private industrial land owners, and the local watershed council. AREMP sampled 41 sites in the watershed to establish baseline conditions prior to the restoration activities that will take place in 2007, and will conduct follow up sampling in 5 years. Thanks to our probabilistic sampling design, we can use Wolf Creek data as part of our evaluation of the Northwest Forest Plan.

Want to know more?

Visit our website

[www.reo.gov/monitoring/
watershed](http://www.reo.gov/monitoring/watershed)

or contact one of us directly.

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directed to Jake Chambers at 541.750.7067
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Monitoring Data Available Online

<http://www.reo.gov/monitoring/watershed>

All of our roads, vegetation, and stream survey data collected through the 2006 field season are available online at www.reo.gov/monitoring/watershed. Data are available on aquatic macroinvertebrates, fish, terrestrial and aquatic amphibians, periphyton, wood, pools, pebble counts, pool tail crest fines, stream morphological characteristics, temperature, dissolved oxygen, pH, conductivity, riparian vegetation, road density, and road crossings. A complete list of data is available on the website.

